

Please amend the claims to read as indicated in the following list of claims:

1. [Currently amended] A method of dynamically controlling usage of a resource by ~~task~~ data-processing entities of a multimodal system that is arranged to receive user input in multiple input modalities for use in combination by an application being run by the multimodal system, the data-processing entities being respectively involved in processing different input modalities in a data-processing device, the method comprising:  
receiving inputs regarding: input mode usage by a user of the data processing device, modal requirements of a dialogue manager and an application or service, and/or confidence in a recognition process for each modality at a bandwidth moderator;  
determining a target relative usage of a data-processing resource;  
wherein a ~~the~~ relative average actual or allocated usage of the resource by the ~~task~~ data-processing entities is dynamically ~~adjusted~~ allocated by said bandwidth moderator according to one or more of the following:  
actual usage of the different input modalities by a the user of the device;  
confidence in the results of processing carried out in respect of each of the input modalities;  
pragmatic information on mode input modality usage; and  
processing at least one of the input modalities using the resource as dynamically allocated by said bandwidth moderator.

2. [Original] A method according to claim 1, wherein the resource is communication bandwidth.

3. [Original] A method according to claim 1, wherein the resource is processing power.

4. [Original] A method according to claim 1, wherein the resource is memory.

5. [Original] A method according to claim 1 applied to each of two separate resources each used by different respective entities of said different input modalities, the adjustment of the relative usage by the different modalities of the two resources being independent of each other.

6. [Original] A method according to claim 1 applied to each of two separate resources each used by different respective entities of said different input modalities, the adjustment of the relative usage by the different modalities of the two resources being jointly controlled.

7. [Currently amended] A method according to claim 1, wherein said resource is used by multiple ~~task~~ data-processing entities for each modality, the relative usage of the resource being first adjusted between modalities and then between ~~task~~ data-processing entities in the same modality.

8. [Currently amended] A method according to claim 1, wherein said resource is used by multiple ~~task~~ data-processing entities for each modality, the relative usage of the resource being first adjusted between different groups of equivalent ~~task~~ data-processing entities of different modalities and then between ~~task~~ data-processing entities of the same group.

9. [Currently amended] A method according to claim 1, wherein adjustment of the relative usage of the resource allocation is effected by one of: controlling operation of the ~~task~~ data-processing entities to adjust their output to the resource; controlling the flow of output from the ~~task~~ data-processing entities to the resource; controlling the allocation of the resource between the ~~task~~ data-processing entities.

10. [Currently amended] A[[n arrangement]] multimodal system comprising;  
one or more processors for running application software;  
input apparatus for receiving user inputs in multiple different input modalities for use by said application software;  
~~task~~ data-processing entities respectively involved in processing data in respect of different input modalities  
[[,]];  
a limited resource arranged to be used by the ~~task~~ data-processing entities [[,]];  
a moderator for dynamically adjusting the a relative average actual or allocated usage of the resource by the

~~task~~ data-processing entities in dependence on one or more of the following:

actual usage of the different input modalities by a user;

confidence in the results of processing carried out in respect of each of the input modalities;

pragmatic information on ~~mode~~ input modality usage.

11. [Currently amended] A system ~~An arrangement~~ according to claim 10, further comprising a respective additional ~~task~~ data-processing entity associated with each said input modality, and a communications system arranged to intercommunicate the ~~task~~ data-processing entities associated with the same input modality; said limited resource being communication bandwidth provided by said communications system.

12. [Currently amended] A system ~~An arrangement~~ according to claim 10, wherein the ~~task~~ data-processing entities comprise a shared processing system and said limited resource is the processing power provided by this processing system.

13. [Currently amended] A system ~~An arrangement~~ according to claim 10, wherein the ~~task~~ data-processing entities comprise a shared memory unit and said limited resource is the memory provided by the memory unit.

14. [Currently amended] A system ~~An arrangement~~ according to claim 10, further comprising further ~~task~~ data-

processing entities involved in processing respective ones of said input modalities, a further limited resource arranged to be used by said further ~~task~~ data-processing entities, and a further moderator for dynamically adjusting the relative average actual or allocated usage of the resource by the further ~~task~~ data-processing entities; the operation of the two moderators being independent of each other.

15. [Currently amended] A system ~~An arrangement~~ according to claim 10, further comprising further ~~task~~ data-processing entities involved in processing respective ones of said input modalities, a further limited resource arranged to be used by said further ~~task~~ data-processing entities, and a further moderator for dynamically adjusting the relative average actual or allocated usage of the resource by the further ~~task~~ data-processing entities; the moderators being arranged to operate in a coordinated manner.

16. [Currently amended] A system ~~An arrangement~~ according to claim 10, further comprising further ~~task~~ data-processing entities involved in processing respective ones of said input modalities, the further ~~task~~ data-processing entities also being arranged to use said resource and the moderator being arranged first to adjust relative usage of said resource between modalities and then between ~~task~~ data-processing entities in the same modality.

17. [Currently amended] A system ~~An arrangement~~ according to claim 10, further comprising further ~~task~~ data-

processing entities involved in processing respective ones of said input modalities, the further ~~task~~ data-processing entities also being arranged to use said resource and the moderator being arranged first to adjust relative usage of said resource between different groups of equivalent ~~task~~ data-processing entities of different modalities and then between ~~task~~ data-processing entities of the same group.

18. [Currently amended] A system ~~An arrangement~~ according to claim 10, wherein the moderator is arranged to effect adjustment of the relative usage of the resource by one of: controlling operation of the ~~task~~ data-processing entities to adjust their output to the resource; controlling the flow of output from the ~~task~~ data-processing entities to the resource; controlling the allocation of the resource between the ~~task~~ data-processing entities.

19. [New] A method according to claim 1 wherein the relative average actual or allocated usage of the resource by the data-processing entities is dynamically allocated by said bandwidth moderator according all of the following:

- (i) actual usage of the different input modalities by the user of the device;
- (ii) confidence in the results of processing carried out in respect of each of the input modalities;
- (iii) pragmatic information on input modality usage,

but wherein only one of the three items (i) to (iii) need exist for dynamic allocation of the resource to occur.

20. [New] A system according to claim 10 wherein the relative average actual or allocated usage of the resource by the data-processing entities is dynamically allocated by said moderator according all of the following:

(i) actual usage of the different input modalities by the user of the device;

(ii) confidence in the results of processing carried out in respect of each of the input modalities;

(iii) pragmatic information on input modality usage,

but wherein only one of the three items (i) to (iii) need exist for dynamic allocation of the resource to occur.